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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,790	03/12/2004	Kenneth L. Smith	34121US (KDK)	8337
7590 07/14/2006			EXAMINER	
Richmond, Hitchcock, Fish & Dollar			BOMAR, THOMAS S	
PO Box 2443			ART UNIT	
Bartlesville, OK 74005			PAPER NUMBER	
			3672	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/799,790

Applicant(s)

SMITH ET AL.

Examiner

Shane Bomar

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-38 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-15, 17, 20, 21 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 9, 16, 18, 19 and 22-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3-6, 8, 10-15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,899,186 to Galloway et al.

Regarding claims 1 and 3, Galloway et al disclose a drilling shoe that includes 160 and the lowermost section of casing 150 coupled to a casing section above the lower most section since it is notoriously known that casings are made up of several sections, depending on the depth of the wellbore, the shoe comprising: a fixed section 150 (the lowermost section) adapted to be coupled to the casing section above it; a rotatable section 160 telescopically coupled to the fixed section; said drilling shoe being shiftable between a rotatable configuration and a locked configuration, said rotatable section being rotatable relative to the fixed section when the drilling shoe is in the rotatable configuration, which is when the shear pins 310 break, said rotatable section being rotationally fixed relative to the fixed section when the drilling shoe is in the locked configuration, which is when the shear pins are intact (see Figs. 3-6B and col. 4, line 55 through col. 7, line 8). It is noted that the lowermost casing section and the collapsible section 160 must be taken as a whole to be the drilling shoe because without the lowermost section of casing section 160 would not be able to drill, or perform any of its intended functions.

Regarding claims 4 and 5, the upper end of the fixed section is coupled to a casing section above it and the lower end of the fixed section 150 is coupled to the top of the rotating section 160 at 310, which is a pin received in a recess to prevent rotation, but which allows rotation when the pin is broken (see Fig. 3, for example).

Regarding claim 6, bit 140 is coupled to the end of the rotatable section, wherein the bit is inherently drillable since any bit is capable of being drilled. Furthermore, Galloway et al contemplate drillable materials as part of the invention (see col. 6, lines 14-21).

Regarding claim 8, the pin 310 biases the shoe toward the rotatable configuration (see Fig. 3).

Regarding claim 10, splines may be used as an internal drive member (see col. 5, lines 34-38).

Regarding claim 11, the lowermost fixed section of casing is attached at its upper end to the section of casing above it by threads, as is notoriously known in the art.

Regarding claim 12, Galloway et al disclose a drilling apparatus, coupled to a casing section 150, that comprises a drilling shoe as described in relation to claim 1 above with a fixed and rotatable section, wherein the shoe is selectively rotatable relative to the casing section, the bit 140 being inherently drillable since any bit is capable of being drilled; and a locking mechanism 310 or 330 prevents rotation of the shoe relative to the casing section, whereby the bit is capable of being drilled out after the casing is set (see Figs. 3, 5A, and 6B).

Regarding claim 13, the attachment of the lowermost casing section that is part of the shoe to the casing section above it renders the shoe undetachable from the casing while downhole.

Regarding claims 14 and 15, the locking mechanism is a set of splines (or interlocking teeth), one spline on each section, wherein when the splines are disengaged, the shoe will rotate freely relative to the casing, and when the splines are engaged the shoe will not rotate freely relative to the casing, which would assist any drilling-out procedures carried out on the bit since it would not rotate relative to the bit being used for drill-out (see col. 5, lines 34-46).

Regarding claim 17, a mud motor drives the bit portion 140 of the shoe relative to the casing (see col. 4, lines 1-2).

3. Claims 1, 2, 21, and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,857,487 to Galloway et al.

Regarding claims 1, 21, and 29, Galloway et al disclose a method and apparatus comprising: coupling a drilling shoe 15/18 to a section of casing 12, said shoe having a fixed 15 and rotatable 18 section (see Fig. 1); using the shoe to drill a borehole 30 by rotating the rotatable portion 18 relative to the casing 12 (see Fig. 3); and locking the shoe to the casing section with element 14 so that the shoe is locked relative to the casing section (see Fig. 2). It is noted that a specific order of the method steps has not been established, therefore the prior art only needs to disclose the claimed steps regardless of the order.

Regarding claims 2 and 28, the non-rotatable portion 15 is telescopically coupled with the rotatable section 18, wherein the two sections are shifted relative to one another (see Fig. 4).

Regarding claim 30, one end of section 15 has the connector 17 projecting from it into a recess in rotatable section 18 (see Figs. 1-3).

Regarding claim 31, step (b) of claim 21 is performed while simultaneously rotating casing section 15 (see Figs. 2-3).

***Claim Rejections - 35 USC § 103***

4. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galloway et al in view of US patent application publication 2004/0226751 to McKay et al.

Galloway et al teach the drill bit of claims 6 and 12, but do not explicitly teach that there is a valve in the bit for controlling flow therethrough.

McKay et al teach a drilling shoe similar to that of Galloway et al. It is further taught that a spring 360 can be added into the mud bore 46 to act as a valve for controlling fluid flow, and any number of said valves can be contemplated by one of ordinary skill in the art (see Figs. 2, 3, 9, and 10 of McKay et al). It would have been obvious to one of ordinary skill in the art, having the teachings of Galloway et al and McKay et al before him at the time the invention was made, to modify the bit taught by Galloway et al to include the valve(s) of McKay et al, in order to obtain a bit that will allow the re-establishment of circulation therethrough after a cementing operation (see paragraphs 0043-0046 of McKay et al). One would have been motivated to make such a combination because the valve will prevent cement or other fluids from re-entering the casing, wherein cement re-entering the casing could prove detrimental to the operation.

***Allowable Subject Matter***

5. Claims 32-38 are allowed.
6. Claims 9, 16, 18, 19, and 22-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments, see page 11, filed May 1, 2006, with respect to the rejection(s) of claim(s) 1 and 21 under 35 USC 102(e) have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Galloway et al's '186 patent (with a different interpretation of the reference) and in view of Galloway et al's '487 patent.

***Conclusion***


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 4:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David J. Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

tsb

  
July 10, 2006